

## CLAIMS

1. A mixture, containing a building binder and comprising cellulose, ready for preparing water-based hardenable mixings intended to realise mainly soundproofing agglomerates, characterised in that, based on the mixture composition, the cellulose amount is comprised between 5 kg and 100 kg for each cubic meter of finished material.
2. A mixture according to claim 1, wherein said finished material has a density comprised between 150 kg/m<sup>3</sup> and 2,600 kg/m<sup>3</sup>.
3. A mixture according to claim 1, wherein said cellulose is in the form of fibres.
4. A mixture according to claim 3, wherein said fibres have a length in the range of 0.05 ÷ 10 mm and a diameter in the range of 0.05 ÷ 10 mm.
5. A mixture according to claim 1, wherein said cellulose is in the form of paper or cardboard or the like.
6. A mixture according to claim 5, wherein said paper or cardboard or the like is a recycled product.
7. A mixture according to claim 5 or 6, wherein the pieces of said paper or cardboard or the like products have size less than 100 mm<sup>2</sup>.
8. A mixture according to any of the preceding claims, wherein said cellulose is added only after that a portion of building binder has been homogeneously mixed with water.

9. A mixture according to claim 1, further comprising cork.

10. A mixture according to claim 9, wherein said cork is in the form of granules or powder.

5 11. A mixture according to claim 1 or 9, further comprising a foam.

12. A mixture according to claim 11, wherein said foam is obtained by transforming a foaming liquid product mixed with water and air.

10 13. A mixture according to claim 1 or 9, further comprising a spongy material.

14. A mixture according to claim 13, wherein said spongy material is polystyrene or similar materials, either virgin or recycled, preferably either in spherical form or ground.

15 15. A mixture according to claim 1 or 9 or 11 or 13, further comprising an inert, called "light inert", having a specific weight in the range from 0 kg/m<sup>3</sup> to about 500 kg/m<sup>3</sup>.

16. A mixture according to claim 1, further comprising an inert, called "heavy inert", having a specific weight in the  
20 range from about 500 kg/m<sup>3</sup> to about 2,000 kg/m<sup>3</sup>.

17. A mixture according to claim 1 or 9 or 11 or 13 or 15 or 16, further comprising a coloured pigment.

18. A mixture according to claim 1, wherein the building binder is cement.

25 19. A mixture according to claim 1, wherein the building

binder is lime.

20. A mixture according to claim 1, wherein the building binder is any natural or synthetic binder acting as a cement-like binder.

5 21. A method for preparing water-based hardenable mixings intended to realise mainly soundproofing agglomerates starting from a mixture, containing a building binder and comprising cellulose, characterised in that it comprises the steps of:

- 10 - preparing a certain quantity of mixture, containing a building binder and comprising cellulose, wherein, based on the mixture composition, the cellulose amount is comprised between 5 kg and 100 kg for each cubic meter of finished material;
- 15 - adding a suitable quantity of water to said certain quantity of mixture;
- mixing said mixture and water till obtaining a hardenable mixing suitable for laying or for producing manufactured articles or for fabricating structural building elements.

20 22. A method according to claim 21, wherein a certain quantity of air is introduced by force inside said mixing.

23. A method according to claim 22, wherein said air quantity is conveyed by a foam.

24. A method according to claim 23, wherein said foam is  
25 obtained by transforming a foaming liquid product mixed with

water and air.

25. A method according to claim 22, wherein said air quantity is conveyed by a spongy material.

26. A method according to claim 25, wherein said spongy  
5 material is virgin or recycled polystyrene, preferably either in spherical form or ground.

27. A method according to claim 22, wherein said air quantity is introduced by an air-carrier inert, called  
"light inert", having a specific weight in the range from 0  
10 kg/m<sup>3</sup> to about 500 kg/m<sup>3</sup>.

28. A building binder-based agglomerate obtained starting from a mixture as claimed in any preceding claims from 1 to 20, characterised by a reduced expansion resulting from the soundproofing and heat insulating properties thereof.

15 29. A building binder-based mainly soundproofing non structural agglomerate obtained starting from a mixture as claimed in claim 15, characterised by having a density in the range 200 ÷ 1,100 kg/m<sup>3</sup>.

30. A building binder-based structural mainly soundproofing  
20 agglomerate obtained starting from a mixture as claimed in claim 16, characterised by having a density in the range 1,100 ÷ 2,600 kg/m<sup>3</sup>.

=====